WE CLAIM:

[C1] A neural implant comprising a device coated with a nanomaterial.

[C2] A neural implant comprising a device, wherein at least one component of the device is made of a nanomaterial.

[C3] The neural implant of claim 1, wherein the nanomaterial comprises carbon nanofibers.

[C4] The neural implant of claim 3, wherein the carbon nanofibers are about 2 to 200 nm in width.

[C5] The neural implant of claim 4, wherein the carbon nanofibers comprise carbon nanotubes.

[C6] The neural implant of claim 5, wherein the carbon nanotubes are functionalized.

[C7] The neural implant of claim 5, wherein the carbon nanotubes are aligned.

[C8] The neural implant of claim 1, wherein the implant is a neural probe.

[C9] The neural implant of claim 2, wherein the nanomaterial comprises a matrix selected from the group consisting of polyurethane, polymethacrylate, polyester, polyvinyl and any copolymers thereof.

[C10] The neural implant of claim 2, wherein the implant is a neural probe.

[C11] A neural prostheses comprising an implantable device with a composite polyurethane carbon nanotube, the device capable of stimulating neuronal growth and minimizing glial scar tissue formation.

[C12] The neural prostheses of claim 11, wherein the carbon nanotube comprises 2% to 100% of the composite.

[C13] The neural prostheses of claim 11, wherein the carbon nanotube forms a carbon nanofiber.

[C14] The neural prostheses of claim 13, wherein the carbon nanofiber is about 100 nm.

[C15] Use of a neural implant that minimizes scar formation comprising:

(a) obtaining a neural implantable device;

(b) coating the implantable device with a nanomaterial; and

(c) securing the implantable device in the neural tissue.

[C16] Use of a neural implant that minimizes scar formation comprising:

(a) obtaining a neural implantable device comprising a nanomaterial; and

(b) securing the implantable device in the neural tissue.

[C17] A method of stimulating neuronal growth and minimizing scar formation by an implant in a brain, the method comprising:

(a) obtaining a neural implantable device comprising a nanomaterial;

(b) securing the implantable device in the brain; and

(c) providing neuronal stimulants through the device.

[C18] An orthopedic prostheses comprising an implantable device coated with a composite polyurethane carbon nanotube, the device capable of stimulating osteoblast proliferation and minimizing fibroblast encapsulation.

[C19] A method of stimulating osteoblast proliferation and minimizing fibroblast encapsulation by an orthopedic implant, the method comprising:

(a) obtaining an orthopedic implantable device comprising a nanomaterial; and

(b) securing the implantable device.

[C20] A method of selecting a nanomaterial suitable for implant, the method comprising:

(a) determining structural dimensions of a biological molecule in a biological tissue; and

(b) fabricating the nanomaterial whose surface structural dimension is similar to the biological molecule.

[C21] A method of claim 20, wherein the nanomaterial comprises carbon nanofibers of about 2-200 nm in width.

[C22] A method of claim 20, wherein the biological molecule is laminin.